

ATTACHMENT 3

FUTURE TACTICAL TRUCK SYSTEMS (FTTS)

ACTD Demonstrator Capabilities and Priorities

6 July 2004

The following represents the most important capabilities that should be demonstrated during the Military Utility Assessment. Detailed priorities will be provided as part of the down select criteria at the start of work meeting.

| Demonstrator | |
|---|---|
| Maneuver Sustainment Vehicle Distribution Variant | Utility Vehicle Support Variant |
| SURVIVABILITY The FTTS MSV shall provide protection against direct fire weapon threats The FTTS MSV shall provide protection against mine threats The FTTS MSV shall provide protection against Improvised Explosive Devices (IEDs) The FTTS MSV shall provide protection against overhead artillery threats The FTTS shall allow occupants to operate through an NBC environment The FTTS shall have mounting provisions for self defense weapons | SURVIVABILITY The FTTS shall provide protection against direct fire weapon threats The FTTS shall provide protection against mine threats The FTTS shall provide protection against Improvised Explosive Devices (IEDs) The FTTS shall provide protection against overhead artillery threats The FTTS shall allow occupants to operate through an NBC environment The FTTS shall have mounting provisions for self defense weapons |
| NETWORK CENTRICITY The FTTS MSV and UV shall serve as a network centric node in the UA, interface with the Common Relevant Operating Picture (CROP) and provide in-transit visibility to track the platform, crew, and cargo via embedded C4I equipment on the FTTS MSV to include different types of suites, architectures, network peripherals, subsystems, and radios. | NETWORK CENTRICITY The FTTS MSV and UV shall serve as a network centric node in the UA, interface with the Common Relevant Operating Picture (CROP) and provide in-transit visibility to track the platform, crew, and cargo via embedded C4I equipment on the FTTS UV to include different types of suites, architectures, network peripherals, subsystems, and radios. |
| DISTRIBUTION (Transloading) The MSV shall be capable of transloading 463L Pallets, flatracks, tankracks, other payloads (e.g. NLOS-CLU), and containers up to the allowable capacity of the MSV to/from the MSV, to another MSV, a MSV CT, an aircraft (C-130, C-17, or C-5), TSV and other Army and Navy watercraft, a flatdeck railcar, a semi-trailer (M871 or M872), or the ground (+/- 12 inches and level ground. The ILHS shall transload from/onto an | DISTRIBUTION The UV shall provide Command and Control for Distribution and other support operations for the Unit of Action. The UV (Support) shall have a payload capacity of 5,100 lbs. |

| Demonstrator | |
|--|--|
| Maneuver Sustainment Vehicle Distribution Variant | Utility Vehicle Support Variant |
| uneven ground slope of five degree from the prime mover's lateral and horizontal axes. | |
| MAINTAINABILITY (Maintenance Ratio) Each FTTS MSV shall achieve the following maintainability requirement: the FTTS MSV maintenance ratio (MR) shall not exceed 0.025 maintenance man-hours per operating-hour (MMH/OH) (Mean Time to Repair) The summation of all Operator maintenance events shall not exceed a total of 0.5 man-hours per day. No single operator task may exceed 0.5 man-hours per maintenance event. Mean Time To Repair (MTTR) for all Essential Function Failures (EFF) shall be equal to 0.25 clock-hours. Maximum Time To Repair (MTTRmax) for 95% of Essential Function Failures (EFF) shall be equal to of 0.5 clock-hours. All times are with or without armor protection. (Diagnostics) Each FTTS MSV shall incorporate embedded diagnostics/BITE that unambiguously detects and isolates 80% of all essential and mission-critical functions. The diagnostics shall be able to fault isolate: <ul style="list-style-type: none"> a. To one LRU 80% of the time. b. To two or fewer LRUs 90% of the time. c. To three or fewer LRUs 99% of the time. | MAINTAINABILITY (Maintenance Ratio) Each FTTS MSV shall achieve the following maintainability requirement: the FTTS MSV maintenance ratio (MR) shall not exceed 0.025 maintenance man-hours per operating-hour (MMH/OH) (Mean Time to Repair) The summation of all Operator maintenance events shall not exceed a total of 0.5 man-hours per day. No single operator task may exceed 0.5 man-hours per maintenance event. Mean Time To Repair (MTTR) for all Essential Function Failures (EFF) shall be equal to 0.25 clock-hours. Maximum Time To Repair (MTTRmax) for 95% of Essential Function Failures (EFF) shall be equal to of 0.5 clock-hours. All times are with or without armor protection. (Diagnostics) Each FTTS MSV shall incorporate embedded diagnostics/BITE that unambiguously detects and isolates 80% of all essential and mission-critical functions. The diagnostics shall be able to fault isolate: <ul style="list-style-type: none"> a. To one LRU 80% of the time. b. To two or fewer LRUs 90% of the time. c. To three or fewer LRUs 99% of the time. |
| OPERATIONAL RANGE The FTTS MSV shall be capable of operating on internally carried fuel for a minimum distance of at least 600 miles at GVW across the OMS/MP and FTTS drive cycles. | OPERATIONAL RANGE The FTTS MSV shall be capable of operating on internally carried fuel for a minimum distance of at least 600 miles at GVW across the OMS/MP and FTTS drive cycles. |

Demonstrator

Maneuver Sustainment Vehicle Distribution Variant

Utility Vehicle Support Variant

MOBILITY

FTTS MSV Tactical Mobility is defined as 60.9 percent improved roads (paved and gravel) and 39.1 percent-unimproved roads (trails) and cross-country. Cross-country includes beaches, forests, grasslands, tropical jungles, mountains, and deserts throughout all seasonal conditions.

| <u>Road Surface</u> | <u>Terrain</u> | <u>% Operation</u> | <u>*RMS</u> |
|---------------------|------------------------|---------------------|-------------|
| Improved | Hard Surfaced | (Threshold) 53.2 | 0.1" – 0.3" |
| | Gravel | 7.7 | 0.3" – 1.0" |
| Unimproved | Trails & Cross-country | 39.1 | 1.0" – 4.8" |

* Root Mean Squared (RMS) is a measure of surface and terrain roughness used to evaluate trafficability.

MOBILITY

FTTS UV Tactical Mobility is defined as 60 percent improved roads (paved and gravel) and 40 percent-unimproved roads (trails) and cross-country. Cross-country includes beaches, forests, grasslands, tropical jungles, mountains, and deserts throughout all seasonal conditions.

| <u>Road Surface</u> | <u>Terrain</u> | <u>% Operation</u> | <u>*RMS Range</u> |
|---------------------|--------------------------|--------------------|-------------------|
| Improved | Hard Surfaced | 30 | 0.1" - 0.3" |
| | Gravel | 30 | 0.3" - 1.0" |
| Unimproved | Trails and Cross-Country | 40 | 1.0" – 4.8" |

* Root Mean Squared (RMS) is a measure of surface and terrain roughness used to evaluate trafficability

FORCE SUSTAINMENT

Vehicle power generation and management shall be provided to power weapons systems, Army Battle Command System (ABCS), and/or support systems and to recharge Mounted Warrior Soldier System (MWSS) equipment by providing at least 60 kilowatts (kW) for internal and external operational power demands.

The FTTS-Variants shall incorporate an embedded potable water generation and storage capability that allows the FTTS-Variants and assigned operator/crew to operate without external water re-supply.

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The FTTS-Variants shall incorporate an embedded potable water generation and storage capability that allows the FTTS-Variants and assigned operator/crew to operate without external water re-supply.

DEPLOYABILITY

The FTTS MSV and its payload (i.e. flatrack, Common Launcher Unit, 463L pallet) shall not require more than 30 total minutes by the operator with on-board tools and equipment to prepare for embarkation or debarkation on any form of transport (air, land, or sea).

DEPLOYABILITY

The FTTS UV and its payload (i.e. break bulk, pallet, CLU) shall not require more than 30 total minutes by the operator with on-board tools and equipment to prepare for embarkation or debarkation on any form of transport (air, land, or sea).